

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007241**Date Inspected:** 29-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Wu Zhi Feng, Mr. Liu Wei Wei, Mr Li Ming, Mr. Wen Zhong Wan

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

**Tower Bay 10**

The QA Inspector observed ZPMC welder Mr. Jiang Taian, stencil 050038 is using shielded metal arc welding process WPS-485-SMAW-2G(2F) FCM-Repair-1 to make weld repair ND1-A476-77M-2-14A. The QA Inspector measured a welding current of 265 amps and verified the base material is a minimum of 180 degrees Celsius. Items observed by the QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC welder Mr. Jiang Zhou, stencil 040261 is using welding procedure specification WPS-345-FCAW-2G(2F) Repair to flux weld on the end of north tower lift 4 skin B in accordance with weld repair report TWR-1626. The QA Inspector observed ZPMC Quality Control personnel monitoring the base material temperature to ensure the maximum interpass temperature is not exceeded. This QA Inspector measured a welding current of approximately 280 amps and 30 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

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### Tower Bay 11

This QA Inspector observed ZPMC welder Mr. Li Zhaoqian, stencil 048810 is using welding procedure specification WPS-B-T-2231-TC-U5-F to flux cored groove weld WSD1-TL6B/L-4A. The QA Inspector observed ZPMC Quality Control personnel monitoring the base material temperature to ensure the maximum interpass temperature is not exceeded. This QA Inspector measured a welding current of approximately 340 amps and 33 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

The QA Inspector observed ZPMC welder Ms. Cao Xiachua, stencil 056975 using submerged arc welding procedure specification WPS-B-T-2221-C-U2B-S to make groove weld WSDI-A423 B/H-121. The QA Inspector observed Quality Control personnel monitoring the base material temperature and other welding attributes. This QA Inspector measured a welding current of 680 amps and 31.6 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

### OBG Bay 8

The QA Inspector observed ZPMC welder Mr. Xiao Di, stencil 203204 is using shielded metal arc process WPS-B-P-2112 to make fillet tack welds on OBG Side Plate stiffener weld SP3052-001-013. The QA Inspector observed a welding current of approximately 155 amps, the welding electrodes are being stored in a heated container and a ZPMC QC Inspector is monitoring the welding. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Wang Hongbo, stencil 203206 is using shielded metal arc process WPS-B-P-2112 to make fillet tack welds on OBG Side Plate stiffener weld SP3052-001-009. The QA Inspector observed a welding current of approximately 150 amps, the welding electrodes are being stored in a heated container and a ZPMC QC Inspector is monitoring the welding. Items observed by the QA Inspector appear to comply with project specifications.

### OBG Bay 3

This QA Inspector observed ZPMC welder Mr. Chen Chuanzong, stencil 044824 is using welding procedure specification WPS-B-T-2132-3 to flux cored weld FB010-033-001. The QA Inspector observed ZPMC Quality Control personnel monitoring the base material temperature and other welding attributes. This QA Inspector measured a welding current of approximately 290 amps and 30.3 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

### OBG Bay 13

The QA Inspector observed ZPMC welder Mr. Chen Guoqi, stencil 048829 is using the shielded metal arc process to make fillet tack welds to join floor beam FB003-078 to floor beam FB012-010 in the 3G position. The QA Inspector observed a welding current of approximately 170 amps. The QA Inspector did not observe any ZPMC QC Inspectors in OBG bay 13 and approximately ten minutes later all of the workers in OBG bay 13 left the work site and went home. Items observed by the QA Inspector do not completely appear to be fully progressing in

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compliance with project specifications due to a lack of Quality Control Inspectors monitoring this welding.

### Summary of Conversations:

See above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford,William	QA Reviewer

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